

Siletz Bay National Wildlife Refuge

Draft Waterfowl Hunt Plan

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Siletz Bay National Wildlife Refuge Waterfowl Draft Hunt Plan

1. Introduction

In December 2012, the Siletz Bay National Wildlife Refuge (NWR or Refuge) Comprehensive Conservation Plan and Environmental Assessment (CCP/EA or CCP) (USFWS 2012a) was approved by the U.S. Fish and Wildlife Service (USFWS or Service) Regional Director. The CCP will guide the management of Siletz Bay NWR for 15 years. It was finalized after several years of extensive planning and public participation, and it resolved several key issues on the Refuge, including waterfowl hunting. The Siletz Bay NWR CCP/EA describes and analyzes three alternatives and summarizes the planning effort, public comments, and USFWS responses. It is incorporated by reference as part of this Waterfowl Hunt Plan and is available at the following website: http://www.fws.gov/oregoncoast/ccp_nes_slz_bdm.htm. Supporting documents include the Finding of No Significant Impact (FONSI) (December 2012) and the Waterfowl Hunting Compatibility Determination (CCP Appendix B; also appended to this Waterfowl Hunt Plan and incorporated by reference). In accordance with the CCP and its associated FONSI, Siletz Bay NWR will open 87 acres of the Refuge to waterfowl hunting seven days per week on refuge-owned lands that are west of U.S. Highway 101 (Figure 1). Siletz Bay NWR will also open 112 acres to waterfowl hunting three days per week on refuge salt marsh that is east of U.S. Highway 101 and south of Millport Slough (Figure 1).

1.1. About the Refuge

Siletz Bay NWR, established in 1991, is located near Lincoln City on the central coast of Oregon. The approved refuge acquisition boundary totals 1,936 acres, approximately 1,060 acres of which are State-owned tidelands. Currently, refuge lands (defined as lands managed and owned in fee title or under conservation easement by the USFWS) total 568 acres. Refuge lands consist primarily of tidal marsh, diked former tidal marsh in varying stages of muted tidal action, and several smaller forested parcels (Figure 1). The Siletz Bay and River system supports large runs of anadromous fish including Chinook and threatened coho salmon, coastal cutthroat trout, and steelhead.

Large numbers of migratory birds use the marshes and tidal slough areas. Waterfowl species such as mallard, northern pintail, American wigeon, green-winged teal, bufflehead, scaup, red-breasted merganser, and Canada geese feed and rest on the marshes. Eelgrass (*Zostera marina*), which is rare along the Oregon coast, grows in dense stands in shallow areas on mud, gravel, or sand within Siletz Bay. Eelgrass provides a very valuable habitat, including attachment surfaces for clinging invertebrates, spawning areas for many fish species, and a highly sought-after food item for black brant and several species of diving ducks. The largest concentrations of eelgrass in the Siletz Bay area occupy the southern end of Siletz Bay near Siletz Keys, with small patches occurring at the mouth of the bay, the mouth of Schooner Creek, and the southern end of Snag Alley.

Siletz Bay NWR was established with the following purposes:

“for the development, advancement, management, conservation, and protection of fish and wildlife resources” [U.S. Code (U.S.C.) 742f(a)(4)] ... “for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be

subject to the terms of any restrictive or affirmative covenant, or condition of servitude” [16 U.S.C. 742f (b)(1) (Fish and Wildlife Act of 1956)].

For “the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to fulfill international obligations contained in various migratory bird treaties and conventions” [16 U.S.C. 39 100 Stat 3583 (Emergency Wetlands Resources Act of 1986)].

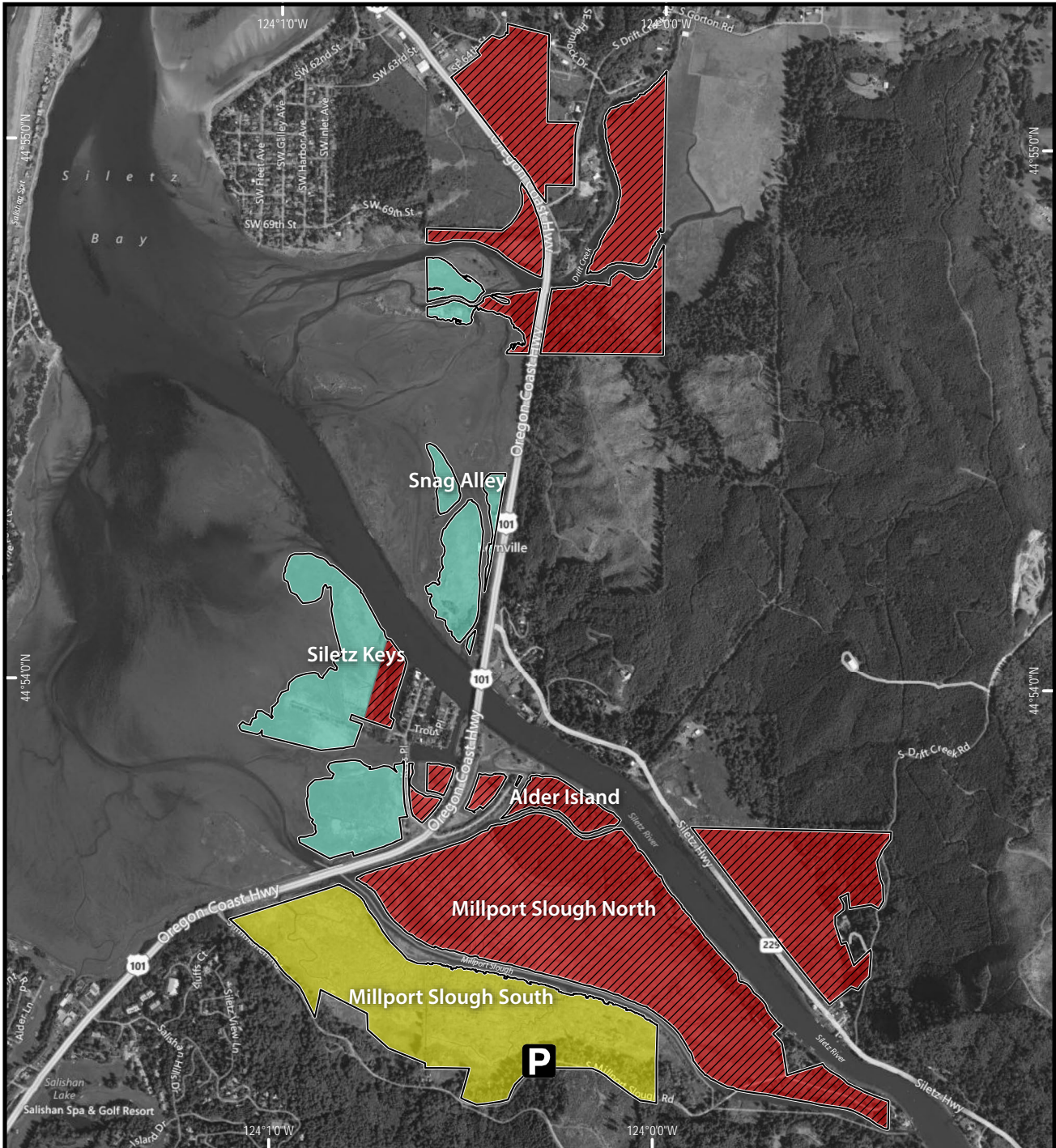
“to conserve (a) fish or wildlife which are listed as endangered species or threatened species...or (b) plants” [16 U.S.C. 1534 (Endangered Species Act of 1973)].

The following principles guided the development of the recently completed CCP/EA for Siletz Bay NWR (USFWS 2012a). The Siletz Bay NWR Waterfowl Hunt Plan will guide the implementation of the waterfowl hunt program as detailed in the CCP. These principles are consistent with refuge purposes, the National Wildlife Refuge System (NWRS or Refuge System) mission and goals, the NWRS Improvement Act (Public Law 105-57), USFWS policies, and international treaties.

- Enhance, maintain, and protect refuge habitats (including upland forests; forested wetlands; and estuarine and stream-riparian habitats) and other lands for the benefit of migratory birds and other wildlife.
- Gather sufficient scientific information to guide responsible adaptive management decisions.
- Provide visitors compatible wildlife-dependent public use opportunities that foster an appreciation and understanding of the Refuge’s fish, wildlife, plants, and their habitats, and have limited impacts to wildlife.
- Initiate and nurture relationships and develop cooperative opportunities to promote the importance of the Refuge’s wildlife habitat, and support refuge stewardship.
- Protect and manage the Refuge’s cultural resources, and identify new ways to gain an understanding of the Refuge’s history and cultural resources.

Figure 1

Siletz Bay National Wildlife Refuge Waterfowl Hunt Area

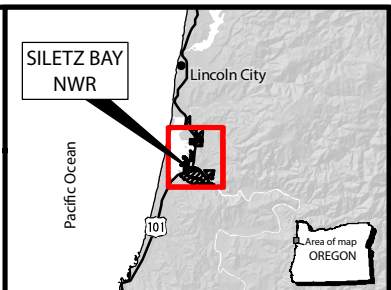


LEGEND

- Refuge Managed Lands (Fee Title or Easement)
- Waterfowl hunting to be allowed 7 days per week
- Waterfowl hunting to be allowed 3 days per week
- Area closed to all hunting

All other Refuge lands not depicted on this map are closed to all hunting. Hunters must comply with Refuge and ODFW regulations.

Parking Area



1.2. Waterfowl Hunting Opportunities on the Refuge and Surrounding Areas

Siletz Bay NWR has been closed to public use since it was established in 1991. However, the navigable waters that flow through the Refuge including Millport Slough, the Siletz River, and Drift Creek are used by the general public primarily for sport fishing and recreational boating. Since 2005, the Refuge has offered seasonal, guided wildlife interpretive trips via canoe and kayak through the State-owned, navigable waters that flow through Siletz Bay NWR. Fishing occurs on State tidelands and in waterways adjacent to refuge lands but is done primarily from boats in the deeper channels of the bay. The primary clamming area in Siletz Bay, near the Refuge, stretches from the mouth of Drift Creek south across the mudflats in Snag Alley. Clamming is conducted on State-owned tidelands.

Public waterfowl hunting opportunities along the central coast of Oregon (from the Salmon River estuary south to Alsea Bay near Waldport) are limited to small tracts of State-owned lands (D. Cottam, Oregon Department of Fish and Wildlife [ODFW], pers. comm.). Over the past two decades waterfowl hunting in the Siletz Bay area has primarily occurred on the State-owned tidelands of Siletz Bay west of U.S. Highway 101. The tidelands are managed by the Division of State Lands and are legally open to hunting so long as the hunter remains 200 yards or more from the shoreline or road. Waterfowl hunting activity within Siletz Bay is fairly low. Hunting takes place almost exclusively before the end of November, at which time the higher tides and unprotected character of Siletz Bay cause the area to be unattractive to waterfowl hunters. In addition, most resting ducks remain within the 200-yard safety zone separating the Salishan Spit from the tidelands that are open to hunting. The area available for waterfowl hunting is also limited by the availability of public parking and boat access.

Other potential waterfowl hunting areas along the central coast include the Salmon River estuary as well as Yaquina and Alsea Bays. The Salmon River estuary, located approximately 6 miles north of Siletz Bay NWR, receives some light hunting use by hunters using boats, and light or limited use by walk-in hunters. Because it is a narrow river valley and heavily vegetated, its primary use is as a high-tide waterfowl hunt from boats. Yaquina Bay in Newport, approximately 20 miles south of the Refuge, receives very little waterfowl hunting pressure as most of the bay is within the city limits and therefore closed to hunting. Brant use the bay but remain primarily within city limits, and waterfowl hunting occurs almost exclusively upriver and during high tides in the large sloughs off the bay. Alsea Bay in Waldport, located approximately 35 miles south of the Refuge, is recommended by ODFW as the best place to hunt waterfowl on the central coast, although at low tide the entire north bay drains to mudflat, making it inaccessible by boat. Waterfowl hunters in Alsea Bay also compete with anglers for use of the bay in the fall.

2. Conformance with Statutory Authorities

National wildlife refuges are guided by the mission and goals of the NWRS, the purposes of an individual refuge, USFWS policy, and laws and international treaties. Relevant guidance includes the NWRS Administration Act of 1966, as amended by the NWRS Improvement Act of 1997, Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations (CFR) and the Fish and Wildlife Service Manual.

The mission of the NWRS is “to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant

resources and their habitats within the United States for the benefit of present and future generations of Americans” (NWRS Administration Act of 1966 as amended, 16 U.S.C. 668dd-668ee).

The NWRS Improvement Act of 1997 provides guidelines and directives for the administration and management of all areas in the NWRS. The Act also recognized that wildlife-dependent recreational uses involving hunting, fishing, wildlife observation, photography, environmental education, and interpretation, when determined to be compatible with the mission of the NWRS and purposes of a refuge, are legitimate and appropriate public uses of the NWRS. Compatible wildlife-dependent recreational uses are the priority public uses of the NWRS, and they receive priority consideration in planning and management.

Conformance of refuge uses with refuge purposes is determined through a formal compatibility determination process. Compatibility means that the use will not materially interfere with or detract from the fulfillment of the purposes of a refuge or mission of the NWRS (603 FW 2). The waterfowl hunt program, as described below in Section 5, was determined to be compatible with refuge purposes, with stipulations (see CCP Appendix B).

The initial cost of establishing a waterfowl hunt program on the Refuge was estimated at \$13,000 (USFWS 2012a). Annual costs to administer the waterfowl hunt on the Refuge, if fully staffed, were estimated in 2012 at approximately \$7,000. Waterfowl hunting will be permitted in accordance with State and Federal regulations and seasons. Refuge-specific regulations will also govern waterfowl hunting activities (see Section 7.1).

3. Statement of Objectives

Waterfowl hunting objectives and strategies in the Siletz Bay NWR CCP were designed to provide a quality hunting experience that meets refuge guidelines and policies. Opening the Refuge to waterfowl hunting will provide a quality, safe opportunity for hunters to hunt geese, ducks, and coots while minimizing impacts to other wildlife and other recreational users. A quality waterfowl hunting experience on the Refuge is defined as having (1) a high priority on safety; (2) clear and concise regulations that are readily available; (3) minimal conflict with wildlife and habitat objectives; (4) minimal conflict with other priority public use activities; and (5) minimal conflict with neighboring lands.

4. Assessment

4.1. Flyway, Regional, and Local Analysis

4.1.1. Flyway Analysis

Waterfowl follow distinct, traditional migration corridors, also known as “biological flyways,” in their annual travels between breeding and wintering areas. Since 1948, waterfowl have been managed through four administrative “Flyways” that are based on those migration paths: the Atlantic, Mississippi, Central, and Pacific Flyways. The review of the policies, processes, and procedures for waterfowl hunting are covered in a number of documents (Flyways.us 2012).

The National Environmental Protection Act (NEPA) considerations by the USFWS for hunted migratory game bird species are addressed by the programmatic document, “Final Supplemental

Environmental Impact Statement: Issuance of Annual Regulations Permitting the Sport Hunting of Migratory Birds (FSES 88-14),” filed with the Environmental Protection Agency on June 9, 1988. The Service published a Notice of Availability for this document in the Federal Register (FR) on June 16, 1988 (53 FR 22582) and the Record of Decision on August 18, 1988 (53 FR 31341). Annual NEPA considerations for waterfowl hunting frameworks are covered under a separate environmental assessment and FONSI. Further, in a notice published in the Federal Register on September 8, 2005 (70 FR 53776), the USFWS announced its intent to develop a new Supplemental Environmental Impact Statement (SEIS) for the migratory bird hunt program. Public scoping meetings were held in the spring of 2006, as detailed in the Federal Register on March 9, 2006 (71 FR 12216). The Service released the draft SEIS on July 9, 2010 (75 FR 39577).

Because the Migratory Bird Treaty Act stipulates that all hunting seasons for migratory game birds are closed unless specifically opened by the Secretary of the Interior, the Service annually promulgates regulations (50 CFR Part 20) establishing the Migratory Bird Hunting Frameworks. The frameworks are essentially permissive in that hunting of migratory birds would not be permitted without them. Thus, in effect, Federal annual regulations both allow and limit the hunting of migratory birds.

The Migratory Bird Hunting Frameworks provide season dates, bag limits, and other options for the States to select. The outcome is intended to result in a level of harvest that is appropriate based upon biological assessments prepared annually by the USFWS. These biological assessments detail the overall status of migratory game bird populations. In North America, the process for establishing waterfowl hunting regulations is conducted annually. In the United States, the process involves a number of scheduled meetings (e.g., Flyway Study Committees, Flyway Councils, USFWS Regulations Committee) in which information regarding the status of waterfowl populations and their habitats is presented to individuals within the agencies responsible for setting hunting regulations. In addition, public hearings are held and the proposed regulations are published in the Federal Register to allow public comment.

For waterfowl, these annual assessments include the Breeding Population and Habitat Survey, which is conducted throughout portions of the United States and Canada and is used to establish an annual waterfowl population status report (for example, USFWS 2012b). In addition, the number of waterfowl hunters and resulting harvest are closely monitored through both the Harvest Information Program and the “Wing Bee,” which utilizes duck wings sent in from a sample of hunters to compute the species composition of the duck harvest (see <http://central.flyways.us/surveys/surveys-conducted/wing-bee> for more information). Since 1995, such information has been used to support the Adaptive Harvest Management (AHM) process (USFWS 2012c) for setting duck hunting regulations. Under AHM, a number of decision-making protocols taking into account population models and environmental conditions iteratively determine the choice (package) of predetermined regulations (appropriate levels of harvest) that constitute the framework offered to the States that year. In Oregon, the ODFW Commission then selects season dates, bag limits, shooting hours, and other options from the Pacific Flyway package. The Commission’s selections can be more restrictive, but cannot be more liberal than AHM allows. Thus, the level of hunting opportunity afforded each State increases or decreases each year in accordance with the annual status of waterfowl populations.

Each national wildlife refuge considers the cumulative impacts to hunted migratory species through the Migratory Bird Hunting Frameworks published annually in the Service’s regulations on migratory bird hunting. Season dates and bag limits for national wildlife refuges open to hunting are never longer or larger than the applicable State regulations. In fact, based upon the findings of an

environmental assessment developed when a refuge opens a new hunting activity, season dates and bag limits may be more restrictive than the State allows.

Oregon is within the Pacific Flyway, which also includes those states and portions of states west of the Continental Divide, including Alaska. The most recent (2011-2012) duck harvest for the Pacific Flyway was 3.2 million birds, which represents approximately 20% of the estimated 15.8 million ($\pm 6\%$) ducks harvested in the United States during the 2011-2012 waterfowl hunting season (Raftovich et al. 2012). The estimated goose harvest for the Pacific Flyway during the 2011-2012 season was 429,900, which represents approximately 15% of the estimated annual U.S. harvest of an estimated 2.9 million ($\pm 5\%$) geese.

4.1.2. Regional and Local Analysis

Every year, the Service conducts surveys that are used to estimate waterfowl hunting activity, success, and harvest by species. Results are used by the USFWS and State wildlife agencies, in part, to establish season lengths and bag limits designed to maintain healthy, sustainable waterfowl populations. During the 2011-2012 waterfowl hunting season, hunters in Oregon harvested an estimated 480,300 ($\pm 24\%$) ducks and 65,400 ($\pm 20\%$) geese (Raftovich et al. 2012).

Waterfowl hunting has occurred on the State-owned tidelands of Siletz Bay west of U.S. Highway 101 for decades. However, refuge-owned lands west of U.S. Highway 101 in Siletz Bay have been closed to waterfowl hunting since the Refuge was established in 1991. On State-owned tidelands of Siletz Bay during the 2010-2011 hunting season, hunters harvested very few ducks and the numbers are considered to be below reportable levels (R. Kerr, Oregon State Police [OSP], pers. comm.). Waterfowl harvest data are unavailable because only a small number of hunters pursue waterfowl in the Siletz Bay area, and no hunters were surveyed for harvest information during the 2011-2012 hunting season. At any given time there are generally only one to three hunting parties in Siletz Bay because the small space open for hunting is further constrained by a limited number of spots with good hunting quality (e.g., the mouth of the sloughs). Waterfowl hunters tend to self-limit their numbers. Most hunting occurs in October and November, and tides influence hunting times. By December tides increase in height and strength so that almost no hunting occurs in Siletz Bay (D. Cottam, ODFW, pers. comm.). The number of waterfowl harvested under the refuge hunt program is not expected to have a measureable effect on refuge waterfowl population numbers.

The most heavily harvested duck species in Oregon are mallard, American wigeon, northern pintail, green-winged teal, and northern shoveler (Raftovich et al. 2012). The most abundant duck species identified at Siletz Bay during the mid-winter waterfowl survey include mallard, northern pintail, American wigeon, green-winged teal, bufflehead, and scaup (USFWS unpublished data). In 2012, continental populations of mallard, green-winged teal, northern shoveler, and scaup were all above their long-term averages (Raftovich et al. 2012). American wigeon and northern pintails were 17% and 14%, respectively, below their long-term average. Overall waterfowl harvest levels in the local area surrounding Siletz Bay NWR represent a very small portion of the waterfowl production for the State and the Pacific Flyway and of the total harvest based on production surveys and mid-winter surveys. Given the low harvest rates of all these species relative to the State harvest, Siletz Bay NWR harvest numbers are expected to make up a very small proportion of local, State, or Pacific Flyway harvest, and the refuge hunt program will not significantly contribute to population changes of these species.

4.2. Are wildlife populations present in numbers sufficient to sustain optimum population levels for priority refuge objectives other than hunting?

The estuarine habitat of Siletz Bay supports several thousands of migratory waterfowl. Waterfowl numbers vary greatly from year to year and within the season depending on habitat conditions and yearly variables such as weather and breeding production. However, waterfowl use in Siletz Bay is generally high. The most abundant duck species at Siletz Bay during the fall and winter are mallard, northern pintail, American wigeon, green-winged teal, bufflehead, and scaup (USFWS unpublished data). Dabbling ducks feed and rest on the marsh and the marsh-mudflat interface. In addition, Siletz Bay contains some eelgrass beds, which are utilized as a food source by migratory waterfowl species including black brant and American wigeon. The largest concentrations of eelgrass occupy the southern end of Siletz Bay near Siletz Keys, with small patches occurring at the mouth of the bay, the mouth of Schooner Creek, and the southern end of Snag Alley (USFWS 1990). Tidal salt marsh restoration on the Refuge on the south side of Millport Slough in 2003 has provided additional quality wetland habitat within the Refuge and can support large numbers of waterfowl. Mallards and wood ducks, which are found wintering in the Siletz Bay area, have been documented as breeders on refuge lands (USFWS unpublished data).

Along the Oregon coast, including Siletz Bay, mid-winter waterfowl surveys are conducted during the first two weeks in January as part of a continent-wide protocol. Observers count ducks, geese, swans, and American coots from a fixed-wing aircraft, and an overall abundance is estimated (USFWS unpublished data). During the mid-winter waterfowl surveys from 1986 to 2009, the overall mean count of waterfowl on Siletz Bay, including refuge lands, was 896 individuals. The lowest count was 297 individual birds recorded in 2000 and the largest was 2,582 in 1991. These data are collected from a fixed-wing aircraft at an altitude of 200-300 feet and traveling 80-120 miles per hour (mph), which limits ability to survey all areas and all habitats and count every individual present. The mid-winter waterfowl survey serves as an index for comparative purposes and is not necessarily representative of the number of ducks that may be present within the entire geographic area. However, general abundance and population trends can be inferred from the results of the mid-winter waterfowl survey. Waterfowl abundance is usually lower during the January mid-winter survey compared to fall months, when birds are concentrated on the bay prior to dispersing throughout the area due to field and seasonal wetland flooding (R. Lowe, pers. comm.). Refuge counts for ducks have generally ranged between 500 and 1,200 over the past several winters.

It is not anticipated that waterfowl hunting will negatively affect priority refuge objectives or wildlife populations on the Refuge. Based on conversations with the OSP officers and ODFW biologists, who include Siletz Bay in their area of responsibility, hunter use of and harvest from Siletz Bay are relatively low. Due to limitations posed by tides and weather, the acreage being opened on Siletz Bay NWR for waterfowl hunting will add limited opportunity for expansion of waterfowl hunting opportunities on Siletz Bay. Given the low waterfowl harvest rates relative to the large wintering duck population, the refuge hunt program will not significantly contribute to waterfowl population changes, and the area should support a sustainable harvest.

In addition, the Siletz Bay NWR waterfowl hunt has been designed with measures and restrictions to ensure it does not negatively affect other refuge priority objectives. For example:

- The hunt areas are limited in size and location, to ensure that sufficient sanctuary for waterfowl is available.

- Waterfowl hunting on the east side of the highway will be allowed only three days per week to limit wildlife disturbance.
- Hunter outreach and education will be part of the waterfowl hunt program, to reduce wildlife disturbance and the potential for conflict among visitors.

4.3. Is there competition for habitat between target species and other wildlife?

A wide variety of other migratory and resident birds use the estuary and refuge tidal marsh. Great blue herons and other wading birds use the bay as a foraging area, and there is a small breeding colony of great blue herons on the Refuge. Thousands of shorebirds use the estuary as stop-over habitat. Marsh-nesting birds such as marsh wren, savannah sparrow, and common yellowthroat are abundant. A diversity of raptors are commonly observed hunting prey within the marshes and mudflats. California brown pelicans use the lower bay for foraging and the Salishan Spit as a roost site. At Siletz Bay NWR, waterfowl hunting will occur outside of the breeding season for these non-target species. The portions of Siletz Bay NWR that remain closed to waterfowl hunting will provide sanctuary to waterfowl and other wildlife. Limiting waterfowl hunting on the east side of the highway to three days per week will also help reduce human disturbance to wintering migratory birds. See the Siletz Bay NWR CCP/EA (USFWS 2012a) and the Waterfowl Hunting Compatibility Determination (CCP Appendix B) for additional description of effects on wildlife and habitat. Competition between species targeted by the waterfowl hunt program and other wildlife or their habitats is not considered a limiting factor.

4.4. Are there unacceptable levels of predation by target species on other wildlife species?

Not applicable.

5. Description of Waterfowl Hunt Program

5.1. Areas of the Refuge That Support Populations of the Target Species

Siletz Bay NWR provides important wintering and migration (stop-over) habitat for a variety of ducks and geese. Surveys and observations have indicated waterfowl make significant use of the open bay, mudflats, and tidal marsh with heaviest use occurring from September through November and again during spring migration. The southern portions of the bay from the mouth of Drift Creek to Salishan Spit receive the most use. Key habitats where waterfowl concentrate in the estuary include both refuge hunt and non-hunt areas as well as State tidelands. Some of the important resting and feeding habitats on the Refuge will remain closed to waterfowl hunting in order to provide undisturbed (sanctuary) areas for waterfowl and other birds.

5.2. Areas to Be Opened to Public Hunting

The Service will establish a waterfowl hunting program on 87 acres of refuge-owned lands that are west of U.S. Highway 101, and on 112 acres of refuge lands that are east of U.S. Highway 101 and south of Millport Slough (Figure 1). There is a demand for more public hunting around Siletz Bay, especially in areas that will allow for walk-in access. Opening the Refuge to waterfowl hunting and providing walk-in opportunities, at both Millport Slough and on refuge lands west of U.S. Highway 101, will enhance and slightly increase waterfowl hunting opportunities in the area. Lands west of

U.S. Highway 101 get the most use by waterfowl, and since the State tidelands adjacent to the Refuge are already hunted, opening the Refuge will effectively expand this hunting area and therefore will likely provide the highest-quality waterfowl hunting opportunity on the Refuge.

The 87 acres of refuge-owned lands that are west of U.S. Highway 101 lands consist of tidal salt marsh where the Siletz River and Millport Slough empty into the bay near the development of Siletz Keys and at the mouth of Drift Creek. Boundary posting along the tidal marsh and mudflat interface near Siletz Keys is difficult to maintain due to the difficulty in keeping posts upright and intact in the marsh, which is inundated by tides twice daily. Consequently, there is often confusion among hunters as to where the refuge boundary ends and the State-owned tidelands begin. The Refuge has maintained that as long as hunters were in the mudflats and not east of the vegetation line they were most likely on State tidelands; however, this boundary has been difficult to legally enforce. Opening refuge lands west of U.S. Highway 101 will not only enhance waterfowl hunting in Siletz Bay, but it will also decrease the uncertainty of legal hunt boundaries and eliminate the issue of hunters trespassing over refuge lands to access the State hunting area. The Service will also establish a 100-yard safety zone to prohibit waterfowl hunting on refuge property that extends westward from the refuge boundary line on the west side of the housing development of Siletz Keys.

The 112 acres of refuge lands that are east of U.S. Highway 101 and south of Millport Slough (Millport Slough South Unit) are being opened for waterfowl hunting to provide an additional option for walk-in waterfowl hunting, especially during moderate tides. Lands south of Millport Slough that are open to waterfowl hunting will remain closed to other public uses during hunting season.

5.3. Species to Be Taken, Hunting Periods, Hunting Access

Waterfowl hunters will be allowed to hunt geese, ducks, and coots seven days per week on refuge-owned lands that are west of U.S. Highway 101, and three days per week on refuge lands east of U.S. Highway 101 and south of Millport Slough. The established days for waterfowl hunting on the Millport Slough South Unit will be Wednesday, Saturday, and Sunday. Waterfowl will be taken in accordance with State, Federal, and refuge-specific regulations. Waterfowl hunters must only possess federally approved nontoxic shotshells while in the field.

Hunter access to refuge lands will only be allowed from one hour before sunrise to one hour after sunset. Refuge waterfowl hunting hours will be in accordance with State regulations listed in the Game Bird Shooting Hour Table (ODFW 2012). Construction of permanent blinds will not be allowed; however, hunters will be allowed to use portable blinds or blinds constructed of on-site dead vegetation or driftwood under the condition that they either be removed or disassembled at the end of each day. Bag limits and hunting seasons on Siletz Bay NWR will conform to ODFW regulations.

Hunters using boats will be able to reach refuge lands on both the east and west side of U.S. Highway 101 during high tides from a private boat launch on the Siletz River. The Millport Slough South Unit can be accessed by boat or by using a short trail and a small gravel parking area located on South Millport Slough Road. Over time the existing parking area and trail will be improved by the USFWS to support the waterfowl hunting program.

Although dogs are prohibited on the Refuge away from parking lots, they are a vital part of the waterfowl hunting tradition and can reduce the loss of waterfowl to the hunter's bag and hence prevent waste and reduce the overall impact to the resource. Because of their role, both as part of the waterfowl hunting tradition and their contribution to increasing the likelihood of retrieval of birds

that have been shot, dogs used in the act of waterfowl hunting will be allowed on the Siletz Bay NWR per Service Policy in 50 CFR 32.26.21. Hunters are encouraged to use dogs as an aid to retrieving waterfowl during the hunting season; however, dogs must remain under control of the handler at all times. Dogs must be in a vehicle or on a leash until being used for hunting.

5.4. Justification for the Permit, If One Is Required

No refuge-issued permit is required. However, hunters must comply with all State and Federal regulations regarding waterfowl hunting, including provisions outlined in 50 CFR 32.2, which states:

- Each person shall secure and possess the required State license and waterfowl validation.
- Each person 16 years of age and older shall secure and possess a Federal Migratory Bird Hunting Stamp while hunting migratory waterfowl.
- Each person shall comply with the terms and conditions authorizing access or use of wildlife refuges.

5.5. Procedures for Consultation and Coordination with the State

ODFW was involved in the needs assessment and design of the waterfowl hunt during the preparation of the Siletz Bay NWR CCP/EA. ODFW supported the preferred alternative described in the CCP/EA and approved by the Regional Director. Waterfowl hunting will continue on State tidelands adjacent to refuge lands, and the USFWS will manage the waterfowl hunt program on refuge lands. Refuge law enforcement officers will coordinate regularly with OSP officers to conduct law enforcement, outreach, and education, and to enforce bag limits, species limits, and the requirement for federally approved nontoxic shot.

5.6. Methods of Control and Enforcement

The following methods will be used to control and enforce hunting regulations:

- Refuge and waterfowl hunting area boundaries will be clearly posted.
- The Refuge will develop an informational sheet on the rules and regulations of waterfowl hunting at Siletz Bay NWR.
- Access to the Refuge will be prohibited from one hour after sunset to one hour before sunrise.
- The USFWS will conduct law enforcement patrols on a regular basis to ensure compliance with State and Federal waterfowl hunting regulations as well as refuge-specific regulations pertinent to the hunt, including compatibility stipulations (see Compatibility Determination, CCP Appendix B).
- USFWS law enforcement staff will coordinate with OSP officers and other law enforcement agencies. OSP officers will patrol State lands when available to help ensure compliance with laws and hunting regulations. Concurrent jurisdiction will allow OSP officers as well as Lincoln County Sheriff Department officers authority on refuge lands as well.
- Information and hunting area maps will be made available on the refuge website, at the refuge headquarters in Newport, at ODFW offices, and eventually at the Millport Slough South parking area.

- USFWS will work with ODFW to include a description of the Siletz Bay Refuge hunting program and pertinent regulations in the annual State of Oregon Game Bird Regulations publications.

5.7. Funding and Staffing Requirements

Administering the waterfowl hunt will require refuge staff time to coordinate with ODFW and the local community, develop an informational “tear sheet” with regulations for the waterfowl hunt, produce news releases, respond to hunter inquiries, conduct hunter and visitor outreach, minimize conflicts among users, coordinate with OSP, conduct law enforcement, maintain boundary posting and hunter information sites, monitor impacts to wildlife and habitat and visitor use, and ensure public safety (see CCP Appendix B). Additional funds will be required to improve a small gravel parking area at Millport Slough Road.

This new hunt program was described in the Siletz Bay NWR CCP, specifically in the Compatibility Determination and the Implementation Appendix (CCP Appendices B and C). Full implementation will become possible only with increased funding and staffing to assist in enforcement, outreach, and monitoring. Implementation during at least the first few years of the program will be done with existing staffing, so it will redirect some effort from other high-priority habitat and public use programs. Because of the proximity of State tidelands, close coordination will be needed between Oregon Coast NWR Complex staff and ODFW and OSP personnel. This coordination will be necessary to effectively conduct outreach and enforcement and to implement regulations.

Surveying and posting Siletz Bay NWR waterfowl hunting boundaries will be accomplished prior to the start of the 2013-2014 waterfowl hunting season. Law enforcement and outreach efforts to educate waterfowl hunters about the boundaries and regulations involving waterfowl hunting on Siletz Bay NWR will commence following publication of the final CCP and Waterfowl Hunt Plan.

6. Measures Taken to Avoid Conflicts with Other Management Objectives

The Siletz Bay NWR waterfowl hunt program was designed to provide a quality waterfowl hunting opportunity, while minimizing or eliminating conflicts with refuge purposes, goals, and management objectives. These objectives include a focus on estuarine and other habitat restoration and reduction in human disturbance to fish and wildlife. Refuge objectives also include providing the public with safe, compatible, and accessible wildlife viewing opportunities that reduce conflicts between refuge users (see the Siletz Bay NWR CCP [USFWS 2012a] and the Waterfowl Hunting Compatibility Determination [CCP Appendix B]).

6.1. Biological Conflicts

Human disturbance to wintering birds and other wildlife using the tidal marshes of Siletz Bay NWR will occur as a result of waterfowl hunting activity. Migratory and wintering waterfowl require access to areas with adequate food reserves and areas where they can loaf and roost undisturbed. They generally minimize time in flight and maximize foraging time because flight requires considerably more energy than any other activity, except egg laying. In addition to direct mortality of individual hunted birds, human disturbance associated with waterfowl hunting includes loud noises such as those produced by shotguns and boat motors. This disturbance, especially when repeated

over a period of time, can cause waterfowl to change feeding habits, feed only at night, lose weight, or abandon feeding areas. Prolonged and extensive disturbances may cause large numbers of waterfowl to temporarily or permanently leave disturbed areas (Madsen 1985).

Spatial regulation of hunting activity in the form of providing sanctuaries, or non-hunted areas, is the most common strategy to reduce disturbance caused by hunting. In tidal areas, high-tide roosts present an obvious first choice for sanctuary areas, although night-time roosts may differ from those used by day. Bregnballe and Madsen (2004) found that to increase species diversity in hunted areas, a sanctuary area with quality feeding and resting habitat should be located adjacent to the hunt area. The number of migratory birds that a site can support can be increased if birds can escape a short distance to sanctuary. Thus, sanctuary areas are very important to minimize disturbance to waterfowl populations to ensure their continued use of Siletz Bay. Sanctuary areas also maintain waterfowl in juxtaposition to hunting areas, which may increase harvest opportunities. The North Millport Slough Unit, which is separated from the South Millport Slough hunt area by Millport Slough, will remain closed to waterfowl hunting and all other public uses, providing an area of sanctuary throughout the entire waterfowl hunting season. The 200-yard safety closed zone around the west side of the hunted State tidelands provides a frequently used sanctuary resting area for ducks (D. Cottam, ODFW, pers. comm.) and is immediately adjacent to the area open for waterfowl hunting, although hunting in these open tideflats is difficult.

Other management strategies to reduce biological conflicts include temporal restrictions such as hunting only certain days per week, or only allowing hunting part of the day. By itself, intermittent hunting is generally not found to be the most effective way to minimize hunting disturbance effects (Fox and Madsen 1997). When birds move from a disturbed site, the frequency of disruption affects the probability of their return, and introduces a lag in recovery time to levels of abundance experienced in the absence of hunting. However, an intermittent hunt program can minimize disturbance, especially if the interval of non-hunting time is measured in weeks rather than days (Fox and Madsen 1997). Even if the non-hunted period is shorter, it can improve the ability of a site to sustain waterfowl use in an area that is hunted all season long (Bregnballe and Madsen 2004). Because minimizing disturbance to wintering waterfowl and providing waterfowl hunting opportunities on refuges are both priorities for the USFWS, it is common for refuges to manage hunt programs with intermittent hunting in the form of non-hunt days.

The refuge hunting area west of the highway will be contiguous with the State tidelands open for waterfowl hunting. Based on the confusion that would be caused by closing the refuge area to hunting several days per week while the adjacent State lands are open daily, the waterfowl hunting program on the west of the highway will not be intermittent. However, on the Millport Slough South Unit, the period of non-hunting disturbance will be measured in days rather than instituting a diurnal time restriction closure (e.g., hunting only from sunrise to noon). Waterfowl hunting will be allowed three days per week (Saturday, Sunday, and Wednesdays). Refuge waterfowl hunting hours will be in accordance with State regulations listed in the Game Bird Shooting Hour Table, and access into refuge waterfowl hunting areas will be allowed one hour before sunrise through one hour after sunset.

Boating activity associated with waterfowl hunting during the fall and winter can alter distribution, reduce use of particular habitats or entire areas by waterfowl and other birds, alter feeding behavior and nutritional status, and cause premature departure from areas (Knight and Cole 1995). Because of the potential safety hazard posed by boating in an area with strong tidal influence, waterfowl hunters may use either motorized or non-motorized boats to engage in waterfowl hunting on State tidelands

west of U.S. Highway 101. Disturbance from motorized boats can occur even when waterfowl densities are low, depending upon boats' noise, speed, and capability to cover extensive areas in a short amount of time. However, boat use by waterfowl hunters is expected to be minimal since boat access into Siletz Bay is limited and challenging due to the availability of correct weather conditions (e.g., winds <15 mph) and higher tide levels to fill tidal channels or cover the mudflats.

The waterfowl hunt program on Siletz Bay NWR will also include the following restrictions to reduce biological impacts: (1) hunting of geese, ducks and coots only; (2) limited waterfowl hunting areas, which will be posted and enforced; (3) a requirement to use only federally approved nontoxic shot; (4) sufficient feeding and resting habitat for waterfowl in areas closed to waterfowl hunting (i.e., sanctuary); and (5) periodic biological and social monitoring and evaluation of the waterfowl hunt program, including feedback from users to determine if objectives are being met.

6.1.1. Impacts to Non-target Species

The refuge hunt program indirectly impacts species other than those targeted by hunters. The presence of hunters and dogs, sounds of gunfire, and the sight of hunters traveling to and from hunt areas can disturb other wildlife species such as great blue heron, bald eagle, great egret, and northern harrier which forage in refuge wetlands and waterbodies. This disturbance, especially when repeated over a period of time, may result in some wildlife species altering feeding habits or moving to other areas during the active waterfowl hunting season. Waterfowl hunting will occur outside of the breeding season for these avian species. Accidental shootings of non-game birds are believed to be negligible. Hunters' foot trails and temporary blinds in the Millport Slough South Unit salt marsh could slightly alter wetland vegetation; however, these impacts and those to refuge fish populations and other wildlife are expected to be negligible (see the Waterfowl Hunting Compatibility Determination [CCP Appendix B] for additional discussion of impacts to non-target species).

6.2. Public Use Conflicts

Conflicts between waterfowl hunters and other refuge visitors during the waterfowl hunting season (October through January) are expected to be minor, since the hunt period occurs during the time of year when the activities of wildlife observation, photography, and interpretation receive the lowest amount of use by visitors due to rainy and windy weather. To minimize the potential for conflict between refuge users and reduce associated safety issues, lands south of Millport Slough that are open to waterfowl hunting will remain closed to wildlife observation, photography, and interpretation. Refuge lands west of U.S. Highway 101 will be open to wildlife observation and photography year-round, so there is a potential for conflict to arise between these users and waterfowl hunters. However, the Service anticipates very few, if any, visitors will spend time observing or photographing wildlife via foot in this area due to the lack of an access point for parking and entry into the site and the extreme difficulty involved in walking through mudflats. It is likely that visitors will engage in wildlife observation and photography from boats, but most recreational boating from canoes and kayaks occurs from May to September, thus reducing the likelihood of conflicts between hunters and people observing or photographing wildlife from boats.

It is possible that refuge visitors using Alder Island (Figure 1), once it is developed and opened, could be impacted by hunting on both Millport Slough and refuge lands west of U.S. Highway 101 though the impact is expected to be minor due to the distance of hunters from Alder Island. The Refuge also offers interpreter-led paddle trips in Millport Slough but only during the summer and thus will not overlap with the hunt period. There is very little recreational non-motorized boating

occurring in the bay or along the river in the fall and winter due to inclement weather, so impact from hunting on visitors at this time of year is expected to be minor.

No public entry, for hunting or any other use, will be permitted into the Millport Slough South Unit during the other four days of the week during the waterfowl hunting season. Because the Millport Slough South Unit is easily distinguishable and spatially separated from the waterfowl hunt area on the west side of the highway, the intermittent waterfowl hunting program should be clear to waterfowl hunters.

To ensure safety and minimize conflict between hunters and people engaged in wildlife observation and photography, the USFWS will provide information about the waterfowl hunt program's boundaries and seasons to the general public and those utilizing other refuge programs. Information will be provided at a future information board at the Millport Slough South Unit parking lot, on the refuge website, in the refuge office, and in the ODFW game bird regulations handbook. In addition, law enforcement patrols will be conducted on a regular basis to contact the public and ensure compliance with State, Federal, and refuge regulations. The refuge law enforcement staff will also monitor and collect data on the hunt program's participation and activities to ensure it does not interfere with other wildlife-dependent uses. If necessary, using the best available science and data, the program will be modified accordingly to ensure the program meets the goals and objectives of the Refuge.

6.3. Administrative Conflicts

There are no administrative conflicts at this time.

7. Conduct of the Hunt

7.1. Refuge-specific Hunting Regulations

- Hunting of geese, ducks and coots is allowed on refuge lands west of U.S. Highway 101 seven days per week.
- Hunting of geese, ducks, and coots is allowed on the Millport Slough South Unit of the Refuge three days per week. The established days for waterfowl hunting on the Millport Slough South Unit will be Wednesday, Saturday, and Sunday.
- Only federally approved nontoxic shot may be used or be in hunters' possession while hunting on the Refuge.
- Only portable blinds or blinds constructed of on-site dead vegetation or driftwood may be used. All blinds, decoys, shotshell hulls, and other personal equipment and refuse must be removed from the Refuge at the end of each day.
- Access to the Refuge will be prohibited from one hour after sunset to one hour before sunrise.
- The use or possession of alcoholic beverages while hunting is prohibited.
- Hunters are encouraged to use dogs as an aid to retrieving waterfowl during the hunting season; however, dogs must remain under control of the handler at all times. Dogs must be in a vehicle or on a leash until they are in the marsh as a part of the hunt.
- Hunters may enter closed areas of the Refuge only to retrieve downed birds.

7.2. Anticipated Public Reaction to the Hunt

Waterfowl hunting was discussed at two public meetings held in conjunction with the CCP process. Comments were solicited on waterfowl hunting through a variety of methods, including the public meetings, presentations, planning updates, and the release of the draft CCP/EA. The USFWS received comments regarding opening Siletz Bay NWR to waterfowl hunting. Some commenters supported opening the Refuge on both sides of the highway to waterfowl hunting seven days per week while others supported limiting hunting to three days per week or keeping the Refuge closed to hunting. A few others offered specific concerns regarding public safety or the appropriateness of allowing hunting on a refuge. Offering compatible wildlife-dependent recreation opportunities such as hunting, fishing, wildlife observation, and interpretation is a refuge priority. Public input was considered and efforts were made to design the hunt program to meet the NWRS and refuge-specific goals and objectives, provide a safe and high-quality experience, minimize wildlife disturbance, provide improved wildlife sanctuary, reduce or avoid conflicts with other refuge users, and minimize confusion for hunters. A summary of public comments and the USFWS's responses can be found in Appendix L (Summary of Public Comment and the Service's Responses) in the CCP (USFWS 2012a).

7.2.1. Adjacent Landowners and Economy

The planned opening of 199 acres of refuge tidal marsh within Siletz Bay NWR to waterfowl hunting will complement existing waterfowl hunting in the bay. The economic benefits from expanding waterfowl hunting on Siletz Bay NWR are associated with the money hunters spend on a variety of goods and services for trip-related and equipment-related purchases. Trip-related expenditures include food, lodging, transportation, and other incidental expenses. Equipment expenditures consist of guns, ammunition, decoys, hunting dogs, and special hunting clothing. Waterfowl hunters that hunt both ducks and geese spend an average of \$854 annually (Carver 2008) on the activity. Because Siletz Bay NWR has been closed to public use since it was established there is no baseline on which to formulate the current economic benefits of waterfowl hunting on the Refuge. Noting current trends in waterfowl hunting on adjacent State lands, a significant increase or decrease in hunting levels is not anticipated by opening refuge lands to waterfowl hunting. Consequently it is not anticipated that opening refuge lands to waterfowl hunting will have a significant impact on the local community or its economy.

7.3. Hunter Application and Registration Procedures (if applicable)

Not applicable. This will be a free-roam hunt waterfowl hunt area, which will require no applications or registrations to hunt.

7.4. Media Selection for Announcing and Publicizing the Hunt

The Refuge has a standard list of local and regional media contacts for news releases. A news release announcing the waterfowl hunting opportunities will be sent out prior to the first waterfowl hunting season and annually thereafter. Notices will also be posted on the refuge website and at other appropriate locations. This new hunting opportunity will also be defined in the ODFW game bird hunting regulations handbook (ODFW 2012).

7.5. Hunter Requirements

Hunters are required to be familiar with all State, Federal, and refuge-specific regulations. Refuge-specific regulations will be available on the refuge website and refuge waterfowl hunting tear sheet, at the designated access points for waterfowl hunters, and in the ODFW game bird hunting regulations (ODFW 2012).

1. Age (if restrictions are imposed by the State)

Age requirements will be in accordance with ODFW requirements.

2. Allowable equipment (dogs, vehicles, blinds, sporting arms, ammunition)

Requirements will be in accordance with ODFW and refuge regulations.

3. License and permits

a. All goose, duck, and merganser hunters must have a valid Oregon hunting license, State Harvest Information Program validation and a signed Federal Waterfowl (Duck) Stamp. Residents and nonresidents must possess a Resident Waterfowl Validation or Nonresident Game Bird Validation, respectively.

b. If hunting coots: hunters are required to be in possession of the above permits (a) except that a Federal Duck Stamp is not required.

c. If hunting sea ducks (harlequin duck, scoter, long-tailed duck, and eider): hunters are required to be in possession of the above permits (a) and a Sea Duck Permit.

d. If hunting black brant: hunters must be in possession of the above (a) and a Black Brant Permit.

4. Reporting harvest

Hunters must fulfill all ODFW reporting requirements.

5. Hunter training and safety (if required by State)

Hunters must fulfill all ODFW requirements for training and hunter safety classes.

8. References

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